

CLAIMS

1. A printing plate comprising a raised part (2, 13a, 13b, 13c, 13d) for transferring printing substance (17) to a printing substrate (10), said raised part (2, 13a, 13b, 13c, 13d) including, on its printing surface, a groove (3) passing through from one side to another thereof.

2. The printing plate according to claim 1, wherein said groove (3) has a nearly-triangular cross section.

3. The printing plate according to claim 1, wherein a plurality of said grooves (3) extend in one direction and parallel to each other and are equally spaced apart.

4. The printing plate according to claim 3, being a printing plate (1) for a flexographic press, wherein

said groove (3) has a width (7) along the printing surface of said raised part (2, 13a, 13b, 13c, 13d) of not less than 20 μm and not more than 60 μm , a depth (8) of not less than 25 μm and not more than 75 μm , and a distance (6) between the grooves of not less than 20 μm and not more than 60 μm .

5. The printing plate according to claim 4, said printing plate (1) including said raised part (2, 13a, 13b, 13c, 13d) shaped as a nearly-rectangular frame, wherein a side of said near-rectangle is parallel to a longitudinal direction of said groove (3), and

said raised part (2, 13a, 13b, 13c, 13d) is provided such that said side of said near-rectangle is in a slanting direction relative to a moving direction of said printing plate (1).

6. The printing plate according to claim 4, said printing plate (1) including said raised part (2, 13a, 13b, 13c, 13d) shaped as a nearly-rectangular frame, wherein a side of said near-rectangle and a longitudinal direction of said groove (3) form an angle of approximately 45°.

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7. The printing plate according to claim 6, wherein a moving direction of said printing plate (1) is substantially perpendicular to the longitudinal direction of said groove (3).

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8. The printing plate according to claim 6, wherein the moving direction of said printing plate (1) is substantially parallel to the longitudinal direction of said groove (3).

9. A press comprising said printing plate (1) according to one of claims 1 to 8.

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10. An apparatus for manufacturing a liquid crystal device comprising said printing plate (1) according to one of claims 1 to 8.

11. A method of relief printing comprising:

20 the step of printing by pressing, on a printing substrate (10), a printing plate (1) including a raised part (2, 13a, 13b, 13c, 13d),

said raised part (2, 13a, 13b, 13c, 13d) having, on a surface for transferring printing substance (17), a plurality of grooves (3) passing through from one side to another thereof; and

25 the step of transferring printing substance to the printing substrate (10) by disposing said printing plate (1) on a perimeter surface of a cylindrical plate cylinder (12) and rotating said plate cylinder (12).

12. The printing method according to claim 11, performed by using a

flexographic press.

13. The printing method according to claim 12, wherein said raised part (2, 13a, 13b, 13c, 13d) is shaped as a nearly-rectangular frame, said grooves (3) are linear
5 grooves (3) parallel to each other and equally spaced apart, and the printing substance (17) to be printed onto said printing substrate (10) is a sealing material.

14. The printing method according to claim 13, wherein said sealing material is a sealing material for a flat panel display, said grooves (3) have a width along a surface
10 of said raised parts (2, 13a, 13b, 13c, 13d) of not less than 20 μm and not more than 60 μm , a depth of not less than 25 μm and not more than 75 μm , and a distance (6) between the grooves (3) of not less than 20 μm and not more than 60 μm .

15. The printing method according to claim 14, wherein said step of transferring includes the step of rotating said plate cylinder (12) while using said printing plate (1) with said grooves (3) being parallel with a side of said near-rectangle, a moving direction of said printing plate (1) forming an angle of approximately 45° with a longitudinal direction of said grooves (3).

20 16. The printing method according to claim 14, wherein said step of transferring includes the step of rotating said plate cylinder (12) while using said printing plate (1) with said grooves (3) forming an angle of approximately 45° with a side of said near-rectangle, a moving direction of said printing plate (1) being substantially perpendicular to a longitudinal direction of said grooves (3).

25 17. The printing method according to claim 14, wherein said step of transferring includes the step of rotating said plate cylinder (12) while using said printing plate (1) with said grooves (3) forming an angle of approximately 45° with a side of said

near-rectangle, a moving direction of said printing plate (1) being parallel to a longitudinal direction of said grooves (3).

18. A method of manufacturing a liquid crystal device employing the printing
5 method according to one of claims 11 to 17.